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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,848

09/25/2003

RongLin Li

0701-2754

8699

33939

7590

01/04/2005

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EXAMINER

LE, HOANGANH T

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,848

Applicant(s)

LI ET AL.

Examiner

HoangAnh T Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-24 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 5 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/11/03
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

DETAILED ACTION

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,2,4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawamura et al (the US Patent No. 6,535,170).

The Sawamura et al reference teaches in figure 1D an antenna, comprising: an inverted-L antenna (ILA) 12H fed by an input 13H; and an ILA 12L electromagnetically coupled with respect to the fed ILA, facing the fed ILA, and separated from the fed ILA by a gap, whereby positioning of the gap determines bandwidth of the antenna. The coupled ILA is longer than the fed ILA. The fed ILA 12H comprises a vertical leg 13H; wherein the coupled ILA 12L comprises a vertical leg 13L; and wherein the vertical leg 13H of the fed ILA is parallel to and of a same length with the vertical leg 13L of the coupled ILA. The fed ILA 12H comprises a horizontal leg; wherein the coupled ILA

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comprises a horizontal leg; and wherein the horizontal leg of the fed ILA is shorter than the horizontal leg of the coupled ILA (figure 1D).

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Rasinger et al (the US Patent No. 5,365,246).

The Rasinger et al reference teaches in figure 1 an antenna, comprising: an inverted-L antenna (ILA) 2 fed by an input 4; and an ILA 3 electromagnetically coupled with respect to the fed ILA, facing the fed ILA, and separated from the fed ILA by a gap, whereby positioning of the gap determines bandwidth of the antenna. The fed ILA 2 comprises a vertical leg; wherein the coupled ILA comprises a vertical leg; and wherein the vertical leg of the fed ILA is parallel to and of a same length with the vertical leg of the coupled ILA (figure 1).

Allowable Subject Matter

5. Claims 6-24 are allowed.

6. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: none of the cited art discloses the fed ILA, the coupled ILA, and the gap being positioned with respect to each other to form three sides of a square, or a monopole antenna disposed between the first ILA and the second ILA, and operative to receive input; and a connection between the monopole antenna and the first ILA to feed input to

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the first ILA; or an inner cut loop antenna with a first inverted-L antenna (ILA) facing a second ILA across a first gap, and with the first ILA being fed input while the second ILA is electromagnetically coupled at least to the first ILA; an outer cut loop antenna encompassing the inner cut loop antenna; and the outer cut loop antenna including a third ILA facing a fourth ILA across a second gap, with the third ILA being fed input via a feed probe and a connection connected to the first ILA of the inner cut loop antenna while the fourth ILA is electromagnetically coupled at least to the third ILA.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HoangAnh T Le whose telephone number is (571) 272-1823. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HoangAnh Le
Primary Examiner